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CURRENT LITERATURE.

BOOK REVIEWS.

Nature study.

THE infusion of nature study into our conventional education is like breathing life into a dead body, and yet no subject is in a more chaotic state. It is in danger of being condemned before it has had a fair chance to justify itself. Thrust into the hands of untrained teachers, it has brought to them and their pupils bewilderment and disgust. To give them help, unscientific bookmakers have attempted to organize the subject, and the result has usually been a jumble of ignorance and sentiment. The problem is peculiarly difficult, for it must bring to its solution both experience in teaching children and knowledge of science. Those who have the former qualification have been alone in trying to solve the problem, and have thus far made a conspicuous failure. Those who have only some knowledge of science would be very apt to make an equally conspicuous failure. At least they seem to know enough not to attempt it. Not only is scientific knowledge demanded, but a first-hand knowledge of almost all sciences, and this would naturally cause all but the unscientific to shrink from the task. A book¹ has just appeared which announces the principles of nature study, so far as plants are concerned, with the truest insight. Nothing could be better than the following statements: "Function should precede form;" "It is not important at all to know that the root is fibrous, nor even that the ovate leaves are palmately veined, with a sinuate tooth margin, and are alternately arranged on the stem;" "As a general rule systematic observation defeats its object and stultifies the perceptions of the children; therefore, the main thing should be to keep the *life* side before them."

This certainly rings true, but unfortunately, these excellent ideas do not become embodied in the exercises suggested. Not only are schools afflicted with a conventional education which nature study seeks to vitalize, but there is also a conventional form of botanical instruction which by no means "keeps the life side" before the pupil. Our author knows what she wants, but has not been able to escape the conventional botany. There are a few exercises with leaves which serve to hint at their life relations, and this is

¹ WILSON, MRS. L. L.—Nature study in elementary schools. Small 8vo. pp. xix + 262. The Macmillan Company: New York. 1898. 90 cents. 1898]

about all. Even the exercises in seed germination, as usual, call attention to the non-essentials and miss the large facts. As for the bulk of the work, it is the usual round of taking up plant after plant and observing its structural side, not its "life side." There is some interesting non-scientific information about plants, but this seems to be in order to arouse a factitious interest in an otherwise dull task. Even at the beginning of the second year, the direction is to "teach the names of the floral parts—calyx (sepals), corolla (petals), stamens, pistil—and their uses."

We are told that "in the paragraphs marked 'Facts' such necessary knowledge on the subjects therein treated" is given as the teacher is expected to possess; and also "these facts are accurate and based upon the latest and most eminent authority," an expression which makes one shudder when nature study is designed to banish the book and to break the shackles of "authority." In looking over these "facts" it becomes evident that too many of them have been taken from "eminent authority" rather than from observation.

The statement that "the course here presented does not presuppose special training on the part of the teacher" presents a heresy which cannot be too vigorously denounced. It is further stated that "it is not my intention to disparage the value to the teacher of special training in science. Nevertheless, it may be safely stated that the courses generally pursued in college and university do not necessarily equip the student for practical everyday work with little children. They need to be supplemented by actual experience," chief of which, we venture to say, is experience with the subject. Wooden teaching by those who are not trained in a subject is nowhere so conspicuously a failure as in nature study, where the greatest flexibility in the use of material is absolutely necessary.

The book before us is fuller of good intention than any guide to nature study that we have seen; but it will take a good deal of training in the "life side" of plants to enable one to carry out the intention.—J. M. C.

MINOR NOTICES.

MR. JAMES M. MACOUN has published another one of his "Contributions to Canadian Botany."² It reports plants new to Canada, new stations and changes in nomenclature.—J. M. C.

MR. EDWIN B. ULINE has published the first part of a monograph of the Dioscoreaceæ³ as his doctor's thesis at the University of Berlin. The part is devoted to morphology, especially in its relation to the classification of the group, and necessarily involves considerable compilation, accompanied by

² Reprint from Canadian Record of Science 267-286. 1897.

³ Eine Monographie der Dioscoreaceen, Leipzig, Wilhelm Engelmann, Dec. 1897.